

**Remarks****I. Status**

In the Office Action dated October 29, 2007, the Examiner: (i) objected to claim 7; (ii) rejected claims 1-5, 7-11, and 19-26 under 35 U.S.C. § 103(a) as being unpatentable over Skinner et al, (US006721740B1), in view of Collins (US005963951A), and in view of Salam et al, (US006594654B1).

To better protect the invention in the marketplace, Applicant cancelled all non-method claims in this Response. Applicant reserves the right to pursue claims directed to other statutory classes in a subsequent application. Applicant has also amended claims 13, 15, and 23, and added new claims 28-36 to more clearly define the invention.

Claims 13-17, 23, 25, and 28-36 will be pending after entry of this Amendment.

**II. Claim Objection**

The Examiner objected to claim 7 as containing a typographic error. Applicant has cancelled claim 7, thereby obviating this objection.

**III. Rejections under 35 U.S.C. § 103(a)****A. The proposed combination fails to teach or suggest all claim elements**

In conventional subject-observer systems, each subject maintained a list of observers and, when the subject's state changed, notified each observer of its state change. This notification occurred regardless of the observer's particular interest or the observer's capacity to handle the update. The observers would then request the updated information, again regardless of the observer's particular interest or the observer's capacity to handle the update. The subject's updates are then issued, only to be discarded by that observer. This drawback made conventional designs inflexible and inefficient, particularly in modern "distributed" systems because the remote messages are comparatively slow.

The claimed inventions, as amended, overcome these drawbacks by introducing observer created and controlled aspect objects into a subject/observer implementation. In operation, each

observer creates one or more aspect objects (i.e., both data and the procedures to manipulate that data) and then issues instructions to attach the aspect object(s) to the subject. These aspect objects, in turn, provide the observer with virtually unlimited flexibility to specify what specific type of information it wants, in what form the information it wants that information sent, and how frequently it wants the information to be sent.

Turning now to the proposed combinations, the primary reference implements the subject/observer paradigm in a completely different way. Skinner uses a special “update management component,” complete with a heavy-weight “interest registry,” to manage interest criteria. *Skinner, col. 8, lines 24-32*. In the claimed inventions, in contrast, the observers themselves create aspect objects with the required logic and then attach those aspect objects directly to the subjects. The aspect objects, in turn, perform the requested filtering and/or throttling functions. Accordingly, Applicant respectfully submits that Skinner fails to teach or suggest at least “in an observer, creating an aspect object, the aspect object comprising logic adapted selectively communicate update information from a subject to the observer based on configuration information, the configuration information comprising an attribute of the observer,” “attaching the aspect object to the subject,” and “in the aspect object, interrogating the update to generate to generate the update information” in claim 13. Applicant also respectfully submits that Skinner fails to teach or suggest at least “a) by an observer object, creating an aspect object, the aspect object comprising logic adapted selectively communicate update information from a subject object to the observer based on, the configuration information comprising a desired type indicator and a desired communication rate indicator;” b) attaching the aspect object to the subject object, and “c) in response to a state change indication from the subject object . . . 2) by the aspect object, interrogating the update to generate an update type indicator; 3) by the aspect object, modifying the update based on a comparison between the update type indicator and the desired type indicator to produce a modified update; 4) by the aspect object, sending the modified update to an accumulator; 5) by the aspect object, using the desired communication rate indicator to determine whether the object is ready to receive the modified update” in claim 23.

Salam and Collins also fail to teach or suggest these elements. Instead, these references are directed at Internet search engines and on-line dating services, and are not otherwise related to subject-observer design paradigms.

B. There would be no motivation to make the proposed combination.

As explained in the Background Section, the present invention is directed at object-oriented (“OO”) programming techniques. *E.g.*, pg. 2. The essence of these techniques is the use of objects, which generally contain some information and a set of operations capable of manipulating that data. The secondary references, in contrast, are directed at Internet search engines and on-line dating services. As such, the objects managed in the secondary references are fundamentally different than ‘objects’ in an OO programming sense. Because the secondary references are non-analogous art, Applicant respectfully submits that there would be no motivation to make the proposed combination. *MPEP § 2141.01(a)(I)*.

#### **IV. Conclusion**

Applicant believes that the present application is now in condition for allowance and respectfully requests allowance of each of the pending claims. Applicant also invites the Examiner to call Applicant's attorney at the number listed below if the Examiner believes that a telephone interview would be helpful in expediting allowance of the present application.

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Respectfully submitted,

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